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THE JOURNAL OF PHILOSOPHY

HOW IS MIND TO BE KNOWN?

ALL interested in philosophy will agree that the question "What is mind and the mental?" is an important one. They will agree notwithstanding the great difference in conclusions that are arrived at. Some recent discussions of the topic have suggested to me that perhaps it is desirable, if only as a temporary expedient, to raise the question of how the problem of the nature of mind is to be approached—the question, that is, of the way in which the nature of the mental can be *known*. In offering this suggestion I do not intend to suggest anything of the nature of *epistemological* inquiry into the possibility of knowledge, but simply the general question of the method to be used, as one might raise the question of the most effective method of inquiry with respect to any subject-matter.

Asking about the question of method of knowing may serve to explain some of the differences now existing in the views that are held as to the nature of the mental. For it is evident that certain doctrines about the nature of the mental rest upon a virtual assumption that the only method that is at all appropriate is that of *introspection;* and of introspection in the sense in which that word has a signification radically different from the meaning borne by *observation* in connection with everything except the "mental."

The existence of another possible method and something about the character of that other method is suggested by the earlier meaning of the word "introspection." For it was originally used as a synonym for inspection, examination, looking into something, usually with the understanding that the thing looked into was one's own conduct from a moral point of view. It is doubtless true that the fact that one's own conduct was the thing looked into, played a part in development of the later sense of the word in which "introspection" came to stand for an alleged act of immediate and intuitive knowledge of mind or of consciousness. But nevertheless the earlier and later significations are in sharp contrast. The careful thoroughgoing investigation of the moral character of acts performed, which is what is designated by earlier usage, implies in a definite way that the moral nature of those acts is *not* properly

known at the time they are committed, but is something demanding reflective examination.[1]

It was the accepted postulate of ancient and medieval knowledge that *certainty* is an essential property of anything entitled to be called knowledge in its full sense, so that inferred or discursive conclusions depend for their status as knowledge on being derived by inherently necessary true procedures from premises that are immediately and self-evidently known to be true. Modern physical science destroyed the grounds upon which rested the special propositions that had previously been taken to be ultimate first truths and to be the premises upon which the proof of truth of all other scientific truths depended. Nevertheless, the postulate of inherent connection of certainty with knowledge remained. It is a commonplace of the history of modern thought that immediate facts of consciousness, or "mental facts," were appealed to to provide the supposedly required unshakable and indubitable first truths without which there is no possibility of inferring other true propositions. One interesting illustration may be cited. Early modern philosophy retained the belief in the self-evident truth of mathematical definitions and axioms which was common to Greek and medieval philosophy. But the change in physical science gave no logical warrant that truths which are self-evident *qua* mathematical are validly applicable to *physical* phenomena. Hence the necessity (exemplified alike in Descartes and Kant in spite of their other great differences) of finding something completely certain in "consciousness" or "mind" that gives solid warrant to the application.

Persons who are fond of quoting Santayana's remark about the difference between knowing a thing and being it by taking complete possession of it, as if knowing were a kind of eating, and those who accept that principle irrespective of Santayana's endorsement, will be aware of the existence of the radical contrast existing in methods employed in knowing the "mental." For the epistemological doctrine lying back of belief in immediate and certain knowledge of the mental is that in the case of the mental *to be and to be known* are one and the same thing. Indirect approach through more or less prolonged inquiry, with use of formation of hypothesis and by experimental observation, may be required for knowing everything else. But in the case of the mental, so it is assumed, the

[1] It is perhaps worth noting that a somewhat similar change took place in the significations of *conscience* and *consciousness*. *Con-scious*, and *conscire*, originally meant *to know with another*, and *conscire alii* and *conscire sibi* were both legitimate expressions. "To know with one's self" meant, without doubt, private or unshared knowledge. But it did *not* mean knowledge of something intrinsically private.

objects or events to be known are self-revealing, self-disclosing. To have them is to know them.

There are dialectical difficulties in the position. How do we know, apart from comparison and contrast with other subject-matters, that the particular objects or events in question are *mental?* What possible meaning does the word "mental," or even the word "consciousness," have in case the events they are supposed to designate are so unique that no identification with or discrimination from anything else is involved? I am not concerned to follow up this dialectical difficulty. I mention it as a way of calling emphatic attention to the fact that knowledge of *everything else* involves institution of *connections* through operations of comparison and discrimination by means of which connections are discovered. This is the contrasted method of knowing the nature of mind and the mental which is so frequently ignored as to justify raising the question to which this article is devoted.

The statement, often made, to the effect that the particular, individual, unique, can not be known is ambiguous until further qualified. It may mean that it can not be known in its capacity of being particular, or that it can not be known in any way or fashion. The first of these two meanings is consistent with the view that knowledge involves description in terms of traits of connection constituting a kind. In this sense, the immediate qualities that are *had* and which knowledge of the mental is *about* or is *of*, are like the immediate qualities of any event in its particularity of occurrence.[2] For the events which when known are called, say, fire, fever, fight, or by another common noun, are particular in their immediacy of occurrence. In the latter capacity they have no characteristics in common with other occurrences in *their* particularity. If awareness were conferred upon an event, as a Leibnizian monad, it could be said that the qualities of which the event is aware, are *private;* the word "private" being here a strict synonym for "particular." If the same logical method were employed as in the case of the doctrine of the immediate and intuitive self-knowledge of the "mental," an event could then be said to have knowledge of its own qualities, and to be the only existence able to know its "own" states and processes.

This fanciful endowment of events is indulged in as a way of calling attention to that difference between having and knowing (and being known) which characterizes every event in its particu-

[2] It is obvious that "mental" and "mind" designate *kinds.* I pass over the dialectical difficulty involved in the inconsistency of this trait with their alleged uniqueness, since it is probably another form of that previously mentioned—the difficulty of knowing something to be mental without comparison with and discrimination from other things.

larity of occurrence. When, for example, it is said that my toothache is private, is immediately known by me, and is completely inaccessible to every one else, there is just one element in the statement capable of empirical verification. And that element has nothing to do with "knowing." It is a verifiable fact that your *having* a toothache is quite a different event from *my* having it. It does not follow that you know that *what* you have is a toothache any differently from the way in which any one else knows it. As a matter of fact, the dentist probably knows the nature of toothache, the special location and other characteristics of *this* toothache, much better than does the one who *has* it. And the "privacy" of what is had seems to depend upon physical conditions rather than upon anything intrinsic to its nature. There is good ground for believing that were our techniques further advanced, nerve-graftings might enable me to feel or have a toothache whose immediate locus is in the jaw of your head—just as by means of radio we hear a sound originating indefinitely far away.

There are, in short, such things as enjoyments and sufferings which are private in occurrence. That they are *known* in any way different from the way in which we know sounds, colors, etc., seems to be a dictum resting upon an epistemological theory, not upon any evidence specifically relevant to the case. Moreover, the privacy of enjoyments and sufferings in their occurrence seems to describe a *social* fact—as much so as in the case of a miser who has and gloats over a "private" store of gold. I ran across the following in a book I read recently: "The private individual privately setting forth his will by marking a private ballot." It needs no argument to show that ability to cast a private or secret ballot is a publicly determined matter, and an arrangement believed to be socially desirable. The "private individual" who is mentioned in the sentence quoted is able to cast a ballot only when publicly determined conditions of age, citizenship, registration, etc., have been satisfied. Similarly, emphasis upon "private initiative" in business is a mark of a certain *social* regime, is urged by those who support it as a social policy because of alleged social benefits. One can even go so far as to say that the *significance* of the recognition that enjoyments and suffering are privately *had,* is a matter of social morals. For it is an accompaniment of the rather recent development of humanitarianism and of philanthropy which goes beyond racial and creedal limits. The currency of the doctrine which mistakenly converts the event of having into a unique mode of knowing can be said to be a confused product of an "individualistic" *social* movement in politics and economics.

One retort to what I am saying is that it completely overlooks the primary mode of knowledge called *acquaintance.* My argument, however, is far from ignoring the fact of acquaintance. I shall not repeat here what I have said elsewhere about the intimate connection of acquaintance with knowing *how* to make appropriate active responses to an event, as in having a speaking acquaintance with a foreign language, or being acquainted with John F. Exbury. It suffices here to point out the difference between acquaintance-knowledge and any knowledge that makes scientific or philosophical claims for itself. Human beings were well acquainted with torrid heat and frigid cold, with various diseases, with stones, plants, and animals, long before they had anything approaching what now alone passes for scientific knowledge. As the case of Greek and medieval "science" proves, the belief that scientific knowledge is of the same order as acquaintance kept actual science in leading-strings for centuries. Personally, I doubt whether one could even be acquainted with the things he enjoys and undergoes, any more than with milk, oak trees, or neighbors, unless he got beyond what he *has* by means of operations of comparison and discrimination, which result in giving the things in question a general and public status. But the point I am making as to the difference between acquaintance and the kind of knowledge of the mental that could be entitled to recognition in philosophy or psychology is independent of this belief of mine.

Any theory of the nature of the mental which depends for its validity upon postulation of a special mode of knowing, one applying to that particular object and to nothing else, would, I believe, be regarded with highly suspicious eye were it not for the currency of a special type of epistemology. Given that currency, the case for antecedent suspicion is countered by what, upon examination, turns out to be a special case of reasoning in a closed circle. It is said in effect that the peculiar, the extraordinarily peculiar, nature of mind requires an equally peculiar, unique procedure by which to know it. Since, however, the doctrine of the completely unique nature of the mental rests upon an assumption of the way in which it is known, the argument is not exactly convincing.

If the nature of the phenomena termed mental is to be known in the way in which other immediately present unique qualities, such as this *hot,* this *cold,* this *red,* are known then the "mental" stands pretty well at the opposite pole from things that are known with a slight amount of mediation. To know scientifically what red color is, an extensive field of knowledge, factual and theoretical, is a necessary condition. Carefully tested ideas of the nature of light had to be attained, and they were found to involve a tested theory

about electro-magnetism. I need not go into further detail to illustrate the point about the indirect character of knowledge of a particular quality immediately *had* in experience. While I am not here concerned to try to tell what are the distinctive characteristics that describe the mental, I am suggesting that in order to discover the nature of the mental, we might have to begin with the best conclusions that have been reached about behavior from the standpoint of biology, and then utilize all that is known about the modifications produced in such behavior by the complex of conditions constituting culture, including communication or language.

C. I. Lewis, in his article "Some Logical Considerations concerning the Mental" [3] uses at least nine times the phrase "behavioral [behavioristic] and [or] brain states." He thus identifies, without argument, the behavioral account of the mental with description in terms of the brain. Hence it is probably well to state that *behavior*, as I use the word in the previous paragraph, even on the biological level (without reference to behavior as it is culturally constituted), includes a great deal more than "brain events." Indeed, I have difficulty in seeing how any one can give an intelligible account of cerebral behavior unless that limited mode of behavior is itself descriptively determined in connection with the whole scheme of what is known about behavior in its widest biological sense—a sense in which interaction with environmental conditions is included. There is one passage, as against nine of the kind just mentioned, in which Mr. Lewis speaks of "brain facts or facts of physical behavior." Even if "or" is here used to express an alternative instead of a synonym, the adjective "physical" constitutes a limitation of the behavioral approach which will be accepted only by "behaviorists" who subordinate their account of behavior to epistemological considerations.

The last paragraphs are introduced only to illustrate the idea that to *know* mind, in distinction from just *having* qualities that are "mental," one has to go to things that are *not* mind nor mental and to translate qualities that immediately occur into a set of connections between events. The idea of method which they are intended to illustrate is one which stands, as has been indicated, at the opposite pole to the method of complete and indubitable immediate knowledge—a method that eliminates, once for all, the need for reflection and inquiry. Since it is the question of method I am raising, I shall not say anything here about the conclusions as to the nature of mind to which use of the method of systematic in-

[3] This JOURNAL, Vol. XXXVIII (1941), pp. 225–233.

vestigation might lead us. It is, however, pertinent to say that much more in the way of positive results has already been attained than is indicated anywhere in this article.

JOHN DEWEY.

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THE FUNCTION OF GENERAL LAWS IN HISTORY

1. It is a rather widely held opinion that history, in contradistinction to the so-called physical sciences, is concerned with the description of particular events of the past rather than with the search for general laws which might govern those events. As a characterization of the type of problem in which some historians are mainly interested, this view probably can not be denied; as a statement of the theoretical function of general laws in scientific historical research, it is certainly unacceptable. The following considerations are an attempt to substantiate this point by showing in some detail that general laws have quite analogous functions in history and in the natural sciences, that they form an indispensable instrument of historical research, and that they even constitute the common basis of various procedures which are often considered as characteristic of the social in contradistinction to the natural sciences.

By a general law, we shall here understand a statement of universal conditional form which is capable of being confirmed or disconfirmed by suitable empirical findings. The term "law" suggests the idea that the statement in question is actually well confirmed by the relevant evidence available; as this qualification is, in many cases, irrelevant for our purpose, we shall frequently use the term "hypothesis of universal form" or briefly "universal hypothesis" instead of "general law," and state the condition of satisfactory confirmation separately, if necessary. In the context of this paper, a universal hypothesis may be assumed to assert a regularity of the following type: In every case where an event of a specified kind C occurs at a certain place and time, an event of a specified kind E will occur at a place and time which is related in a specified manner to the place and time of the occurrence of the first event. (The symbols "C" and "E" have been chosen to suggest the terms "cause" and "effect," which are often, though by no means always, applied to events related by a law of the above kind.)

2.1 The main function of general laws in the natural sciences is to connect events in patterns which are usually referred to as *explanation* and *prediction*.

The explanation of the occurrence of an event of some specific kind E at a certain place and time consists, as it is usually expressed, in indicating the causes or determining factors of E. Now the assertion that a set of events—say, of the kinds C_1, C_2, . . . , C_n—have caused the event to be explained, amounts to the statement that, according to certain general laws, a set of events of the kinds mentioned is regularly accompanied by an event of kind E. Thus, the scientific explanation of the event in question consists of

(1) a set of statements asserting the occurrence of certain events C_1, . . . C_n at certain times and places,

(2) a set of universal hypotheses, such that

(a) the statements of both groups are reasonably well confirmed by empirical evidence,

(b) from the two groups of statements the sentence asserting the occurrence of event E can be logically deduced.

In a physical explanation, group (1) would describe the initial and boundary conditions for the occurrence of the final event; generally, we shall say that group (1) states the *determining conditions* for the event to be explained, while group (2) contains the general laws on which the explanation is based; they imply the statement that whenever events of the kind described in the first group occur, an event of the kind to be explained will take place.

Illustration: Let the event to be explained consist in the cracking of an automobile radiator during a cold night. The sentences of group (1) may state the following initial and boundary conditions: The car was left in the street all night. Its radiator, which consists of iron, was completely filled with water, and the lid was screwed on tightly. The temperature during the night dropped from 39° F. in the evening to 25° F. in the morning; the air pressure was normal. The bursting pressure of the radiator material is so and so much.—Group (2) would contain empirical laws such as the following: Below 32° F., under normal atmospheric pressure, water freezes. Below 39.2° F., the pressure of a mass of water increases with decreasing temperature, if the volume remains constant or decreases; when the water freezes, the pressure again increases. Finally, this group would have to include a quantitative law concerning the change of pressure of water as a function of its temperature and volume.

From statements of these two kinds, the conclusion that the radiator cracked during the night can be deduced by logical reasoning; an explanation of the considered event has been established.

2.2 It is important to bear in mind that the symbols "E," "C," "C_1," "C_2," etc., which were used above, stand for kinds or properties of events, not for what are sometimes called individual events. For the object of description and explanation in every branch of empirical science is always the occurrence of an event of a certain *kind* (such as a drop in temperature by 14° F., an eclipse of the moon, a cell-division, an earthquake, an increase in employment, a

political assassination) at a given place and time, or in a given empirical object (such as the radiator of a certain car, the planetary system, a specified historical personality, etc.) at a certain time.

What is sometimes called the complete description of an individual event (such as the earthquake of San Francisco in 1906 or the assassination of Julius Caesar) would require a statement of all the properties exhibited by the spatial region or the individual object involved, for the period of time occupied by the event in question. Such a task can never be completely accomplished.

A fortiori, it is impossible to explain an individual event in the sense of accounting for *all* its characteristics by means of universal hypotheses, although the explanation of what happened at a specified place and time may gradually be made more and more specific and comprehensive.

But there is no difference, in this respect, between history and the natural sciences: both can give an account of their subject-matter only in terms of general concepts, and history can "grasp the unique individuality" of its objects of study no more and no less than can physics or chemistry.

3. The following points result more or less directly from the above study of scientific explanation and are of special importance for the questions here to be discussed.

3.1 A set of events can be said to have caused the event to be explained only if general laws can be indicated which connect "causes" and "effect" in the manner characterized above.

3.2 No matter whether the cause-effect terminology is used or not, a scientific explanation has been achieved only if empirical laws of the kind mentioned under (2) in 2.1 have been applied.[1]

3.3 The use of universal empirical hypotheses as explanatory principles distinguishes genuine from pseudo-explanation, such as, say, the attempt to account for certain features of organic behavior by reference to an entelechy, for whose functioning no laws are offered, or the explanation of the achievements of a given person in terms of his "mission in history," his "predestined fate," or simi-

[1] Maurice Mandelbaum, in his generally very clarifying analysis of relevance and causation in history (*The Problem of Historical Knowledge,* New York, 1938, Chs. 7, 8) seems to hold that there is a difference between the "causal analysis" or "causal explanation" of an event and the establishment of scientific laws governing it in the sense stated above. He argues that "scientific laws can only be formulated on the basis of causal analysis," but that "they are not substitutes for full causal explanations" (*l.c.,* p. 238). For the reasons outlined above, this distinction does not appear to be justified: every "causal explanation" is an "explanation by scientific laws"; for in no other way than by reference to empirical laws can the assertion of a causal connection between certain events be scientifically substantiated.

lar notions. Accounts of this type are based on metaphors rather than laws; they convey pictorial and emotional appeals instead of insight into factual connections; they substitute vague analogies and intuitive "plausibility" for deduction from testable statements and are therefore unacceptable as scientific explanations.

Any explanation of scientific character is amenable to objective checks; these include

(*a*) an empirical test of the sentences which state the determining conditions;

(*b*) an empirical test of the universal hypotheses on which the explanation rests;

(*c*) an investigation of whether the explanation is logically conclusive in the sense that the sentence describing the event to be explained follows from the statements of groups (1) and (2).

4. The function of general laws in *scientific prediction* can now be stated very briefly. Quite generally, prediction in empirical science consists in deriving a statement about a certain future event (for example, the relative position of the planets to the sun, at a future date) from (1) statements describing certain known (past or present) conditions (for example, the positions and momenta of the planets at a past or present moment), and (2) suitable general laws (for example, the laws of celestial mechanics). Thus, the logical structure of a scientific prediction is the same as that of a scientific explanation, which has been described in 2.1. In particular, prediction no less than explanation throughout empirical science involves reference to universal empirical hypotheses.

The customary distinction between explanation and prediction rests mainly on a pragmatical difference between the two: While in the case of an explanation, the final event is known to have happened, and its determining conditions have to be sought, the situation is reversed in the case of a prediction: here, the initial conditions are given, and their "effect"—which, in the typical case, has not yet taken place—is to be determined.

In view of the structural equality of explanation and prediction, it may be said that an explanation as characterized in 2.1 is not complete unless it might as well have functioned as a prediction: If the final event can be derived from the initial conditions and universal hypotheses stated in the explanation, then it might as well have been predicted, before it actually happened, on the basis of a knowledge of the initial conditions and the general laws. Thus, e.g., those initial conditions and general laws which the astronomer would adduce in explanation of a certain eclipse of the sun are

such that they might also have served as a sufficient basis for a forecast of the eclipse before it took place.

However, only rarely, if ever, are explanations stated so completely as to exhibit this predictive character (which the test referred to under (*c*) in 3.3 would serve to reveal). Quite commonly, the explanation offered for the occurrence of an event is incomplete. Thus, we may hear the explanation that a barn burnt down "because" a burning cigarette was dropped in the hay, or that a certain political movement has spectacular success "because" it takes advantage of widespread racial prejudices. Similarly, in the case of the broken radiator, the customary way of formulating an explanation would be restricted to pointing out that the car was left in the cold, and the radiator was filled with water.—In explanatory statements like these, the general laws which confer upon the stated conditions the character of "causes" or "determining factors" are completely omitted (sometimes, perhaps, as a "matter of course"), and, furthermore, the enumeration of the determining conditions of group (1) is incomplete; this is illustrated by the preceding examples, but even by the earlier analysis of the broken-radiator case: as a closer examination would reveal, even that much more detailed statement of determining conditions and universal hypotheses would require amplification in order to serve as a sufficient basis for the deduction of the conclusion that the radiator broke during the night.

In some instances, the incompleteness of a given explanation may be considered as inessential. Thus, e.g., we may feel that the explanation referred to in the last example could be made complete if we so desired; for we have reasons to assume that we know the kind of determining conditions and of general laws which are relevant in this context.

Very frequently, however, we encounter "explanations" whose incompleteness can not simply be dismissed as inessential. The methodological consequences of this situation will be discussed later (especially in 5.3 and 5.4).

5.1 The preceding considerations apply to *explanation in history* as well as in any other branch of empirical science. Historical explanation, too, aims at showing that the event in question was not "a matter of chance," but was to be expected in view of certain antecedent or simultaneous conditions. The expectation referred to is not prophecy or divination, but rational scientific anticipation which rests on the assumption of general laws.

If this view is correct, it would seem strange that while most historians do suggest explanations of historical events, many of them deny the possibility of resorting to any general laws in history.

It is, however, possible to account for this situation by a closer study of explanation in history, as may become clear in the course of the following analysis.

5.2 In some cases, the universal hypotheses underlying a historical explanation are rather explicitly stated, as is illustrated by the italicized passages in the following attempt to explain the tendency of government agencies to perpetuate themselves and to expand (italics the author's):

> As the activities of the government are enlarged, more people develop a vested interest in the continuation and expansion of governmental functions. *People who have jobs do not like to lose them; those who are habituated to certain skills do not welcome change; those who have become accustomed to the exercise of a certain kind of power do not like to relinquish their control*—if anything, *they want to develop greater power and correspondingly greater prestige. . . .*
>
> Thus, government offices and bureaus, once created, in turn institute drives, not only to fortify themselves against assault, but to enlarge the scope of their operations.[2]

Most explanations offered in history or sociology, however, fail to include an explicit statement of the general regularities they presuppose; and there seem to be at least two reasons which account for this:

First, the universal hypotheses in question frequently relate to individual or social psychology, which somehow is supposed to be familiar to everybody through his everyday experience; thus, they are tacitly taken for granted. This is a situation quite similar to that characterized in 4.

Second, it would often be very difficult to formulate the underlying assumptions explicitly with sufficient precision and at the same time in such a way that they are in agreement with all the relevant empirical evidence available. It is highly instructive, in examining the adequacy of a suggested explanation, to attempt a reconstruction of the universal hypotheses on which it rests. Particularly, such terms as "hence," "therefore," "consequently," "because," "naturally," "obviously," etc., are often indicative of the tacit presupposition of some general law: they are used to tie up the initial conditions with the event to be explained; but that the latter was "naturally" to be expected as "a consequence" of the stated conditions follows only if suitable general laws are presupposed. Consider, for example, the statement that the Dust Bowl farmers migrate to California "because" continual drought and sandstorms render their existence increasingly precarious,

[2] Donald W. McConnell, *Economic Behavior;* New York, 1939; pp. 894–895.

and because California seems to them to offer so much better living conditions. This explanation rests on some such universal hypothesis as that populations will tend to migrate to regions which offer better living conditions. But it would obviously be difficult accurately to state this hypothesis in the form of a general law which is reasonably well confirmed by all the relevant evidence available. Similarly, if a particular revolution is explained by reference to the growing discontent, on the part of a large part of the population, with certain prevailing conditions, it is clear that a general regularity is assumed in this explanation, but we are hardly in a position to state just what extent and what specific form the discontent has to assume, and what the environmental conditions have to be, to bring about a revolution. Analogous remarks apply to all historical explanations in terms of class struggle, economic or geographic conditions, vested interests of certain groups, tendency to conspicuous consumption, etc.: All of them rest on the assumption of universal hypotheses [3] which connect certain characteristics of individual or group life with others; but in many cases, the content of the hypotheses which are tacitly assumed in a given explanation can be reconstructed only quite approximately.

5.3 It might be argued that the phenomena covered by the type of explanation just mentioned are of a statistical character, and that therefore only probability hypotheses need to be assumed in their explanation, so that the question as to the "underlying general laws" would be based on a false premise. And indeed, it seems possible and justifiable to construe certain explanations offered in history as based on the assumption of probability hypotheses rather than of general "deterministic" laws, i.e., laws in the form of universal conditionals. This claim may be extended to many of the explanations offered in other fields of empirical science as well. Thus, e.g., if Tommy comes down with the measles two weeks after his brother, and if he has not been in the company of other persons having the measles, we accept the explanation that he caught the disease from his brother. Now, there is a general hypothesis underlying this explanation; but it can hardly be said to be a general law to the effect that any person who has not had the measles before will get them without fail if he stays in the company of somebody else who has the measles; that a contagion will occur can be asserted only with a high probability.

[3] What is sometimes, misleadingly, called an explanation by means of a certain *concept* is, in empirical science, actually an explanation in terms of *universal hypotheses* containing that concept. "Explanations" involving concepts which do not function in empirically testable hypotheses—such as "entelechy" in biology, "historic destination of a race" or "self-unfolding of absolute reason" in history—are mere metaphors without cognitive content.

Many an explanation offered in history seems to admit of an analysis of this kind: if fully and explicitly formulated, it would state certain initial conditions, and certain probability hypotheses,[4] such that the occurrence of the event to be explained is made highly probable by the initial conditions in view of the probability hypotheses. But no matter whether explanations in history be construed as "causal" or as "probabilistic" in character, it remains true that in general the initial conditions and especially the universal hypotheses involved are not clearly indicated, and can not unambiguously be supplemented. (In the case of probability hypotheses, for example, the probability values involved will at best be known quite roughly.)

5.4 What the explanatory analyses of historical events offer is, then, in most cases not an explanation in one of the meanings developed above, but something that might be called an *explanation sketch*. Such a sketch consists of a more or less vague indication of the laws and initial conditions considered as relevant, and it needs "filling out" in order to turn into a full-fledged explanation. This filling-out requires further empirical research, for which the sketch suggests the direction. (Explanation sketches are common also outside of history; many explanations in psychoanalysis, for instance, illustrate this point.)

Obviously, an explanation sketch does not admit of an empirical test to the same extent as does a complete explanation; and yet, there is a difference between a scientifically acceptable explanation sketch and a pseudo-explanation (or a pseudo-explanation sketch). A scientifically acceptable explanation sketch needs to be filled out by more specific statements; but it points into the direction where these statements are to be found; and concrete research may tend to confirm or to infirm those indications; i.e., it may show that the kind of initial conditions suggested are actually relevant; or it may reveal that factors of a quite different nature have to be taken into account in order to arrive at a satisfactory explanation.—The filling-out process required by an explanation sketch will, in general, assume the form of a gradually increasing precision of the formulations involved; but at any stage of this process, those formulations will have some empirical import: it will be possible to indicate, at least roughly, what kind of evidence would be relevant in testing

[4] E. Zilsel, in a very stimulating paper on "Physics and the Problem of Historico-Sociological Laws" (*Philosophy of Science*, Vol. 8, 1941, pp. 567–579), suggests that all specifically historical laws are of a statistical character similar to that of the "macro-laws" in physics. The above remarks, however, are not restricted to specifically historical laws since explanation in history rests to a large extent on non-historical laws (cf. section 8 of this paper).

them, and what findings would tend to confirm them. In the case of non-empirical explanations or explanation sketches, on the other hand—say, by reference to the historical destination of a certain race, or to a principle of historical justice—the use of empirically meaningless terms makes it impossible even roughly to indicate the type of investigation that would have a bearing upon those formulations, and that might lead to evidence either confirming or infirming the suggested explanation.

5.5 In trying to appraise the soundness of a given explanation, one will first have to attempt to reconstruct as completely as possible the argument constituting the explanation or the explanation sketch. In particular, it is important to realize what the underlying explaining hypotheses are, and to judge of their scope and empirical foundation. A resuscitation of the assumptions buried under the gravestones "hence," "therefore," "because," and the like will often reveal that the explanation offered is poorly founded or downright unacceptable. In many cases, this procedure will bring to light the fallacy of claiming that a large number of details of an event have been explained when, even on a very liberal interpretation, only some broad characteristics of it have been accounted for. Thus, for example, the geographic or economic conditions under which a group lives may account for certain general features of, say, its art or its moral codes; but to grant this does not mean that the artistic achievements of the group or its system of morals has thus been explained in detail; for this would imply that from a description of the prevalent geographic or economic conditions alone, a detailed account of certain aspects of the cultural life of the group can be deduced by means of specifiable general laws.

A related error consists in singling out one of several important groups of factors which would have to be stated in the initial conditions, and then claiming that the phenomenon in question is "determined" by and thus can be explained in terms of that one group of factors.

Occasionally, the adherents of some particular school of explanation or interpretation in history will adduce, as evidence in favor of their approach, a successful historical prediction which was made by a representative of their school. But though the predictive success of a theory is certainly relevant evidence of its soundness, it is important to make sure that the successful prediction is in fact obtainable by means of the theory in question. It happens sometimes that the prediction is actually an ingenious guess which may have been influenced by the theoretical outlook of its author, but which can not be arrived at by means of his theory alone. Thus, an adherent of a quite metaphysical "theory" of history may have a

sound feeling for historical developments and may be able to make correct predictions, which he will even couch in the terminology of his theory, though they could not have been attained by means of it. To guard against such pseudo-confirming cases would be one of the functions of test (*c*) in 3.3.

6. We have tried to show that in history no less than in any other branch of empirical inquiry, scientific explanation can be achieved only by means of suitable general hypotheses, or by theories, which are bodies of systematically related hypotheses. This thesis is clearly in contrast with the familiar view that genuine explanation in history is obtained by a method which characteristically distinguishes the social from the natural sciences, namely, *the method of empathetic understanding:* The historian, we are told, imagines himself in the place of the persons involved in the events which he wants to explain; he tries to realize as completely as possible the circumstances under which they acted, and the motives which influenced their actions; and by this imaginary self-identification with his heroes, he arrives at an understanding and thus at an adequate explanation of the events with which he is concerned.

This method of empathy is, no doubt, frequently applied by laymen and by experts in history. But it does not in itself constitute an explanation; it rather is essentially a heuristic device; its function is to suggest certain psychological hypotheses which might serve as explanatory principles in the case under consideration. Stated in crude terms, the idea underlying this function is the following: The historian tries to realize how he himself would act under the given conditions, and under the particular motivations of his heroes; he tentatively generalizes his findings into a general rule and uses the latter as an explanatory principle in accounting for the actions of the persons involved. Now, this procedure may sometimes prove heuristically helpful; but its use does not guarantee the soundness of the historical explanation to which it leads. The latter rather depends upon the factual correctness of the empirical generalizations which the method of understanding may have suggested.

Nor is the use of this method indispensable for historical explanation. A historian may, for example, be incapable of feeling himself into the rôle of a paranoiac historic personality, and yet he may well be able to explain certain of his actions; notably by reference to the principles of abnormal psychology. Thus, whether the historian is or is not in a position to identify himself with his historical hero, is irrelevant for the correctness of his explanation; what counts, is the soundness of the general hypotheses involved, no

matter whether they were suggested by empathy or by a strictly behavioristic procedure. Much of the appeal of the "method of understanding" seems to be due to the fact that it tends to present the phenomena in question as somehow "plausible" or "natural" to us;[5] this is often done by means of attractively worded metaphors. But the kind of "understanding" thus conveyed must clearly be separated from scientific understanding. In history as anywhere else in empirical science, the explanation of a phenomenon consists in subsuming it under general empirical laws; and the criterion of its soundness is not whether it appeals to our imagination, whether it is presented in suggestive analogies, or is otherwise made to appear plausible—all this may occur in pseudo-explanations as well—but exclusively whether it rests on empirically well confirmed assumptions concerning initial conditions and general laws.

7.1 So far, we have discussed the importance of general laws for explanation and prediction, and for so-called understanding in history. Let us now survey more briefly some other procedures of historical research which involve the assumption of universal hypotheses.

Closely related to explanation and understanding is the so-called *interpretation of historical phenomena* in terms of some particular approach or theory. The interpretations which are actually offered in history consist either in subsuming the phenomena in question under a scientific explanation or explanation sketch; or in an attempt to subsume them under some general idea which is not amenable to any empirical test. In the former case, interpretation clearly is explanation by means of universal hypotheses; in the latter, it amounts to a pseudo-explanation which may have emotive appeal and evoke vivid pictorial associations, but which does not further our theoretical understanding of the phenomena under consideration.

7.2 Analogous remarks apply to the procedure of ascertaining the *"meaning"* of given historical events; its scientific import consists in determining what other events are relevantly connected with the event in question, be it as "causes," or as "effects"; and the statement of the relevant connections assumes, again, the form of explanations or explanation sketches which involve universal hypotheses; this will be seen more clearly in the subsequent section.

7.3 In the historical explanation of some social institutions great emphasis is laid upon an analysis of the *development* of the institution up to the stage under consideration. Critics of this approach

[5] For a criticism of this kind of plausibility, cf. Zilsel, *l.c.*, pp. 577–578, and sections 7 and 8 in the same author's "Problems of Empiricism," in *International Encyclopedia of Unified Science*, Vol. II, 8.

have objected that a mere description of this kind is not a genuine explanation. This argument may be given a slightly different aspect in terms of the preceding reflections: A description of the development of an institution is obviously not simply a statement of *all* the events which temporally preceded it; only those events are meant to be included which are *"relevant"* to the formation of that institution. And whether an event is relevant to that development is not a question of the value attitude of the historian, but an objective question depending upon what is sometimes called a causal analysis of the rise of that institution.[6] Now, the causal analysis of an event consists in establishing an explanation for it, and since this requires reference to general hypotheses, so do assumptions about relevance, and, consequently, so does the adequate analysis of the historical development of an institution.

7.4 Similarly, the use of the notions of *determination* and of *dependence* in the empirical sciences, including history, involves reference to general laws.[7] Thus, e.g., we may say that the pressure of a gas depends upon its temperature and volume, or that temperature and volume determine the pressure, in virtue of Boyle's law. But unless the underlying laws are stated explicitly, the assertion of a relation of dependence or of determination between certain magnitudes or characteristics amounts at best to claiming that they are connected by some unspecified empirical law; and that is a very meager assertion indeed: If, for example, we know only that there is some empirical law connecting two metrical magnitudes (such as length and temperature of a metal bar), we can not even be sure that a change of one of the two will be accompanied by a change of the other (for the law may connect the same value of the "dependent" or "determined" magnitude with different values of the other), but only that with any specific value of one

[6] See the detailed and clear exposition of this point in M. Mandelbaum's book; l.c., Chs. 6–8.

[7] According to Mandelbaum, history, in contradistinction to the physical sciences, consists "not in the formulation of laws of which the particular case is an instance, but in the description of the events in their actual determining relationships to each other; in seeing events as the products and producers of change" (l.c., pp. 13–14). This is essentially a view whose untenability has been pointed out already by Hume; it is the belief that a careful examination of two specific events alone, without any reference to similar cases and to general regularities, can reveal that one of the events produces or determines the other. This thesis does not only run counter to the scientific meaning of the concept of determination which clearly rests on that of general law, but it even fails to provide any objective criteria which would be indicative of the intended relationship of determination or production. Thus, to speak of empirical determination independently of any reference to general laws means to use a metaphor without cognitive content.

of the variables, there will always be associated one and the same value of the other; and this is obviously much less than most authors mean to assert when they speak of determination or dependence in historical analysis.

Therefore, the sweeping assertion that economic (or geographic, or any other kind of) conditions "determine" the development and change of all other aspects of human society, has explanatory value only in so far as it can be substantiated by explicit laws which state just what kind of change in human culture will regularly follow upon specific changes in the economic (geographic, etc.) conditions. Only the establishment of concrete laws can fill the general thesis with scientific content, make it amenable to empirical tests, and confer upon it an explanatory function. The elaboration of such laws with as much precision as possible seems clearly to be the direction in which progress in scientific explanation and understanding has to be sought.

8. The considerations developed in this paper are entirely neutral with respect to the problem of *"specifically historical laws"*: neither do they presuppose a particular way of distinguishing historical from sociological and other laws, nor do they imply or deny the assumption that empirical laws can be found which are historical in some specific sense, and which are well confirmed by empirical evidence.

But it may be worth mentioning here that those universal hypotheses to which historians explicitly or tacitly refer in offering explanations, predictions, interpretations, judgments of relevance, etc., are taken from *various* fields of scientific research, in so far as they are not pre-scientific generalizations of everyday experiences. Many of the universal hypotheses underlying historical explanation, for instance, would commonly be classified as psychological, economical, sociological, and partly perhaps as historical laws; in addition, historical research has frequently to resort to general laws established in physics, chemistry, and biology. Thus, e.g., the explanation of the defeat of an army by reference to lack of food, adverse weather conditions, disease, and the like, is based on a—usually tacit—assumption of such laws. The use of tree rings in dating events in history rests on the application of certain biological regularities. Various methods of testing the authenticity of documents, paintings, coins, etc., make use of physical and chemical theories.

The last two examples illustrate another point which is relevant in this context: Even if a historian should propose to restrict his research to a *"pure description"* of the past, without any attempt at offering explanations, statements about relevance and determina-

tion, etc., he would continually have to make use of general laws. For the object of his studies would be the past—forever inaccessible to his direct examination. He would have to establish his knowledge by indirect methods: by the use of universal hypotheses which connect his present data with those past events. This fact has been obscured partly because some of the regularities involved are so familiar that they are not considered worth mentioning at all; and partly because of the habit of relegating the various hypotheses and theories which are used to ascertain knowledge about past events, to the "auxiliary sciences" of history. Quite probably, some of the historians who tend to minimize, if not to deny, the importance of general laws for history, are actuated by the feeling that only "genuinely historical laws" would be of interest for history. But once it is realized that the discovery of historical laws (in some specified sense of this very vague notion) would not make history methodologically autonomous and independent of the other branches of scientific research, it would seem that the problem of the existence of historical laws ought to lose some of its weight.

The remarks made in this section are but special illustrations of two broader principles of the theory of science: first, the separation of "pure description" and "hypothetical generalization and theory-construction" in empirical science is unwarranted; in the building of scientific knowledge the two are inseparably linked. And, second, it is similarly unwarranted and futile to attempt the demarcation of sharp boundary lines between the different fields of scientific research, and an autonomous development of each of the fields. The necessity, in historical inquiry, to make extensive use of universal hypotheses of which at least the overwhelming majority come from fields of research traditionally distinguished from history is just one of the aspects of what may be called the methodological unity of empirical science.

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BOOK REVIEW

A Dialectic of Morals. Towards the Foundations of Political Philosophy. MORTIMER J. ADLER. Notre Dame, Indiana: The Review of Politics. 1941. x + 117 pp. $1.80.

The author calls this volume a "distillation of actual arguments which President Hutchins and I have had with students in courses devoted to reading the great works in Ethics and Politics." There

is no effort, however, to preserve the details of student opinion, nor could there be in such brief space. The presumably diverse views of students become views of "the" student—one whom the author considers typical of this generation. This student, misled by the positivists, the psychologists, and the social scientists, has become a "moral skeptic." He believes, for instance, that "all norms or standards are conventional, whether instituted by the will of the community or the will of individuals; and this amounts to saying that moral judgments are ultimately willful prejudices, expressions of emotional bias, of temperamental predilection." The author's purpose is to "engage the skeptic on his own grounds." Beginning with simple premises which the student admits, he endeavors, by "inductive use of dialectic," to develop a modernization of Aristotelian and Thomistic ethics that will provide a basis for eternally valid moral rules.

Early in the dialectical process the student is led to affirm that "whenever anyone finds greater pleasure in one thing than in another, that is the thing he will prefer." From this Mr. Adler quickly infers that "A man *should* always choose more pleasure in preference to less." The student demurs at the word "should." He sees no point in a moral rule which, commanding obedience to a natural law, can not be broken. This is answered by the contention that the rule often is broken—namely, when a present pleasure is preferred to a larger, complex one which is partly present and partly future. No effort is here made to explain how this latter contention, used to defend the moral rule from criticism, is compatible with the initial admission from which the rule is deduced. Mr. Adler accepts the rule as universally valid; and offering no further evidence beyond the observation that we often feel sorry for breaking it, remarks that anyone who denies it "speaks as falsely as a man who says two plus two does not equal four." But he points out, justly, that it is only a small step to the whole moral truth.

In order to develop the remainder of his basis for morals, Mr. Adler takes the student through familiar arguments to show that pleasure is not the only object of desire. A classification is then given of the objects which all human beings do in fact desire. These are: "wealth, bodily goods, social goods, habits, and activity." At this stage in the argument it is not maintained that these are good because desired, but rather desired because objectively good. So the problem is to prove that these desired objects are good, and should be desired.

The solution begins hypothetically: *If* "to live well" is the only thing objectively good in itself, and *if* the classes of objects above

mentioned (wealth, etc.) are means to this end, then these means should, objectively, be desired. The problem now becomes one of showing that these "ifs" (among others that must be omitted for brevity) are not contrary to fact. The second "if" is dealt with by pointing out that the objects mentioned are essential to the realization of human capacities or potentialities. Realization of these potentialities, with due proportion, brings happiness, in the "right conception" of happiness; and to live happily, in this right conception of the term, is to live well. Thus the objects mentioned are means to the end envisaged, though they may be "constitutive means" (parts) no less than "functional means" (causes). A question still remains, however, about the first "if." Is it the case that happiness (living well) is an objective end for all human beings?

At this crucial point in the discussion, Mr. Adler's style, hitherto clear and almost popular, becomes highly involved and condensed. No trustworthy summary can here be attempted, but perhaps the author's own words will serve to indicate the main direction of his thought, and his marked historical affiliations:

> The problem cannot be solved . . . unless we distinguish between "natural desire" and "human (or animal) desire" and until we understand that the good is being as a final cause of motion. Then it will be seen that whatever is imperfect, through privation of being in some determinate respect, has determined potentialities for perfection; each determinate potentiality is a natural appetite or desire for some actualizing determination of the thing's nature; any thing's natural appetite or desire is constituted by all its determinate potencies, whether these be powers which flow from its essence or mere potentialities determined by privation through the thing's possession of contrary forms; each potency has a tendency (and appetite consists in such tendency) toward actual bettering; now that which actualizes a potency satisfies a natural desire or tendency; to be actual in a certain respect is, therefore, the object of every natural desire and this actuality is the final cause of the thing's motion; hence, the good is being as *naturally desirable;* it is whatever completes or perfects the being of a thing in respects in which it is imperfect or incomplete, the very respects which determine its potencies, and hence its natural desires, for perfection. [Pp. 75 f.]

This metaphysical view is used as a basis for showing that happiness or living well is the object of man's "natural desire." The object of *natural* desire, being quite different from the object of any garden-variety of desire, constitutes the real good, as distinct from the apparent good. "Thus we see that the violation of moral truth has two sources: one, bad thinking—misconception of the end, and of the means in general; the other, weak willing—preference for the *apparent* good, under the influence of the passions, rather than for the real good which reason has determined."

The volume concludes with a discussion of politics, where it is maintained that "democracy can be demonstrated to be, on moral grounds, the best form of government." To overcome "the skepticism of *realpolitik* or the doctrinal errors of totalitarianism," the first and important step is to "eradicate its roots in the prevailing positivism which denies philosophical knowledge."

As a brief presentation of the author's philosophical theories and educational aims, the volume will doubtless serve a useful purpose. And for those who are habituated to a metaphysical type of thought, it may afford incentive to further speculation.

It is doubtful, however, that the volume will succeed in leading positivistically inclined students to alter their views. In the first place, a student of positivism or social science, however much he may be caused to dismiss certain problems prematurely, will at least have acquired high standards of logical and terminological rigor; and in rigor the author is not free from many of the common frailties. In the second place, such a student is likely to want his own "skepticism" more carefully represented. Mr. Adler considers no middle ground between eternal ethics and ethical chaos. Realizing that the views he opposes do not belong in the first division, he unceremoniously puts them in the second.

A "relativist" need not believe that human attitudes are in a perpetual state of conflict. He may hope that concerted social action will spring from "natural" desires, but interpret "natural" in a scientific, rather than a metaphysical, sense. And he may assume that *if* human desires were expressed with a more adequate scientific knowledge of their origin and consequences, which a practical moralist might point out, they would be redirected in a way that would afford, if not a complete, at least a workable, basis for moral agreement. Mr. Adler's identification of relativism and chaos comes from his tacit rejection of this assumption. Those who accept the assumption can not pretend that it is wholly secure, for such a broad psychological generalization, at the present state of knowledge, can have but little confirmation; but the positivistically-minded student will probably find this assumption far more trustworthy, and more intelligibly consoling in its promise than any of those many assumptions that underlie Mr. Adler's anachronistic metaphysics.

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BOOK NOTES

Philodemus: On Methods of Inference. A Study in Ancient Empiricism. Edited, with translation and commentary, by PHILLIP HOWARD DE LACY and ESTELLE ALLEN DE LACY. (Philological Monographs, No. X.) Philadelphia: The American Philological Association. 1941. (Agents: Lancaster Press, Inc., Lancaster, Pa., and B. H. Blackwell, Ltd., Oxford, England.) viii + 200 pp. $2.50.

Philodemus was an Epicurean philosopher and poet who lived at Naples in the time of Cicero, writing in Greek. A number of his poems and some philosophical essays have survived in the Herculanean Papyri, including the treatise here edited and translated, whose Greek title appears to have been Περὶ Φαινομένων καὶ Σημειώσεων. The extant text is fragmentary and incomplete, and seems to be little more than a compilation by Philodemus of material drawn from Zeno, Bromius, and Demetrius. It consists of a sequence of statements of Stoic arguments against the Epicurean method of reasoning by analogy, followed by refutations from the Epicurean point of view.

The text was first edited by Gomperz in 1865, and is here re-edited with numerous emendations on the basis of photostats of the Oxford facsimile of the papyrus. The English translation is fluent and clear, but not always as literal as might be desired in the choice of English equivalents for the Greek logical terminology.

In their introductory chapters the authors summarize all available information concerning Philodemus and his works, and sketch the background of the controversies of Cicero's time between Stoics and Epicureans. By way of commentary, the authors paraphrase the sequence of arguments in the text, and trace the historical development of Epicurean empiricism. The final chapter offers a critical comparison of Stoic, Epicurean, and Sceptic theories of knowledge, whereby the Stoics are characterized as "a priori" rationalists, and the Epicureans hailed as the ancient ancestors of modern scientific empiricism. The valuable contributions of the Stoics to formal logic, as well as the essential part played by formal logic in a truly scientific empiricism, is almost completely overlooked by the authors, and the unwillingness of the Epicureans represented by Philodemus to give logical rigor to their procedures of analogical reasoning is viewed as a virtue rather than as a deficiency of their method. The use of the term "a priori" in characterization of the Stoics is both anachronistic and questionable, in the Kantian sense here given to it; certainly the Stoic preference for a formally

explicit logic is compatible with an empiricist theory of evidence or verification, if not indeed required by it.

E. A. M.

Plato: On the Trial and Death of Socrates. Euthyphro, Apology, Crito, Phaedo. Translated into English with an Introduction and Prefatory Notes. LANE COOPER. Ithaca: Cornell University Press. 1941. xiv + 200 pp. $2.00.

To his previous volume containing the *Phaedrus, Ion, Gorgias, Symposium,* and passages from the *Republic* and *Laws,* Professor Cooper has added the familiar grouping of the *Euthyphro, Apology, Crito,* and *Phaedo.* The translation, introduction, and notes are on the same high level of historical scholarship and literary humanism. The translation is exceptionally readable. It preserves the unaffected, extemporaneous quality of the "Socratic conversation," with a few colloquial phrases that point up the repartee without concealing the subtleties of the argument. The introduction should be of use both to beginners and to more advanced students, since it contains information not widely known, and yet presented with a minimum of complications. There is an excellent account of the dialogue "as a literary species," its history, and its four elements of plot, character, method of reasoning, and diction (Aristotle's *muthos, ethos, dianoia,* and *lexis*). The "march of the whole" is called *logos*—that which "is running in the mind of the author as he elaborates the parts of his work, down to the last iota." Sensible and revealing comments are made on Plato's use of paradox and sophistry (he was "a master of that sort of thing, knew what he did, and why, when using it, and was not mastered by it"), on the historicity of the *Apology,* on the correct habit of observation in Plato, on the mixed emotions aroused in the dialogues by the simultaneous suggestion of laughter and tears, and on the Socratic "quest" (exemplified by the translator's own vain and ironical search for a real scholar, "who can teach nobody but himself").

There is a useful List of Dates beginning with the reign of Codrus, paternal ancestor of Plato, in c. 1068 B.C. and ending with the closing of the schools of Athens, A.D. 429. A comprehensive index and "A Brief List of Books for the Study of Plato" complete the book.

D. S. M.

The Religious Function of Imagination. RICHARD KRONER. (Bedell Lectures delivered at Kenyon College.) New Haven: Yale University Press, published for Kenyon College. London: Humphrey Milford, Oxford University Press. 1941. 70 pp. $1.00.

These lectures give in succinct form several ideas basic to the author's more extended Gifford Lectures. He contrasts, in neo-Kantian manner, the methods and field of conceptual thinking as they are exhibited in philosophy, with the concrete images of constructive imagination as they are exhibited in religious myth and revelation. Philosophy, if it aims to grasp totality, is doomed to failure, since its conceptual techniques both isolate and abstract particular contents from the living whole of reality. Religious imagination or revelation, on the other hand, can present reality concretely as an imaged perfect being. Professor Kroner is careful to contrast symbolical or representative functions with the functions of imaginative presentation. Religion is not primarily symbolism, but prophecy and gospel, that is, the imaginative constructions of miracle, myth, and revelation. These constructions have not the same objectivity that conceptual and symbolical processes have, since they can not be verified; they are nevertheless "serious," being an aspect of life itself and sharing both the importance and the risks of practical faith.

H. W. S.

Art Criticism Now. LIONELLO VENTURI. (Lectures delivered March 12, 13, 14, 19, 20, 1941, at the Johns Hopkins University.) Baltimore: The Johns Hopkins Press. 1941. xi + 63 pp. $2.00.

In this study of contemporary art criticism Signor Lionello Venturi writes with a brilliance that is almost deceptive. So interesting are his illustrations, so succinct his arguments, and so engaging his language, that one is apt to be distracted from a full realization of the scope of his critique and the depth of its philosophical foundation.

In esthetics Signor Venturi is apparently a Crocean. This is true even though Venturi's primary emphasis is placed on the need of artist and critic alike to submit to simple, spontaneous sensation. For by sensation he means not the abstract apprehension of qualities cut off from feeling and external to the human spirit, but the concrete apprehension of qualities instinct with feeling and making manifest the human mind. For it is not merely by the

representations of reason that the human character of experience is realized.

Signor Venturi's discussion is amazingly diverse, yet everything he has to say constitutes a development and application of this central position. The impressionists, for example, are praised because of their willingness to accept sensation, a willingness which resulted in the discovery of "a new form of appearance not only void of any intellectual artificiality, but even of the pretension that their form was the form of reality." Abstractionism and Cubism, on the other hand, are rejected. Their advocates confuse intellectual with esthetic form, and thereby fail to achieve that immediacy and unity of expression which comes only with the fusion of feeling and sensation.

That the intellect can enter into direct sensuous expression no less than the emotions, and can do so without losing its intellectual character, apparently does not strike the author as a possibility. That it is a possibility, however, is suggested by one of his own illustrations, namely, functional architecture, in which geometry and engineering seem to have supplanted spurious decoration. Here reason clearly plays a part, but according to the author the intellectual forms of architecture are functions of concrete human living, the realization of which demands imagination. "Before the architect conceives abstract form, he feels the practical use of the building." To this one might reply that none the less intellect plays an intrinsic part in architectural imagination.

In dealing with specific problems Signor Venturi is chiefly concerned with the critical principles which underlie them. Given the primary character of direct sensuous experience, and the secondary character of all discursive forms, representations and meanings in art, it follows that criticism can not rely merely on the relatively external findings of art history, iconology, and laboratory criticism. These are all aids to criticism, and their value as aids depends among other things on the extent to which direct esthetic experience and judgment have entered into them. Sooner or later, however, the critic must face the work of art in question in all innocence and submit his individual mind to its sensations.

J. S.

NOTES AND NEWS

We print the program of the Eighteenth Annual Meeting of the Pacific Division of the American Philosophical Association, which was held at Mills College, California, December 29, 30, and 31, 1941, as follows:

MONDAY, DECEMBER 29

12:30 P.M. Joint Luncheon with the Pacific Conference on the Teaching of Philosophy. Address by *Alexander Meiklejohn.*

2:00 P.M. Homo Faber—Homo Servus (A Bergsonianum). *Philip Merlan*

Philosophy in Wartime ..... *H. C. Brown*

8:00 P.M. On the Nature of Philosophy .....*Marcel Barzin*

Existential and Epistemic Probability. *David Hawkins*

Symbolism and Reasoning ..... *John A. Irving*

TUESDAY, DECEMBER 30

9:00 A.M. Averrhoes' Doctrine of the Mind. ..... *S. C. Tornay*

On Mill and the Definition of the Good. *C. J. Sullivan*

What Does Dewey Mean by an "Indeterminate Situation"? ..... *D. S. Mackay*

2:00 P.M. The Aesthetic Response ..... *Karl Aschenbrenner*

Sense Perception and Aesthetic Experience. *Isabel Creed*

6:30 P.M. Annual Dinner and Smoker. The Presidential Address—"Naturalism in Democracy—Democracy in Culture" by *E. E. Ericksen.*

WEDNESDAY, DECEMBER 31

9:00 A.M. Annual Business Meeting.

10:00 A.M. Perception and Propositions .....*Ernest Hutten*

On the Meaning of the Word "Influence." *W. T. Jones*

The newly elected officers of the Pacific Division of the American Philosophical Association are as follows: President, D. S. Mackay; Vice President, D. A. Piatt; Secretary-Treasurer, Paul Marhenke; New Members of the Executive Committee, Melvin Rader and W. H. Long.

The newly elected officers of the Eastern Division of the American Philosophical Association are as follows: President, Brand Blanshard; Vice President, Katherine E. Gilbert; New Members of the Executive Committee, John Wild and John H. Randall, Jr.